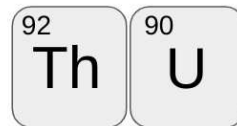




Innovation for Cool Earth Forum

10th Annual Meeting
October 4-5, 2023
Hotel New Otani Tokyo, Japan

New Technologies From Start-up Companies

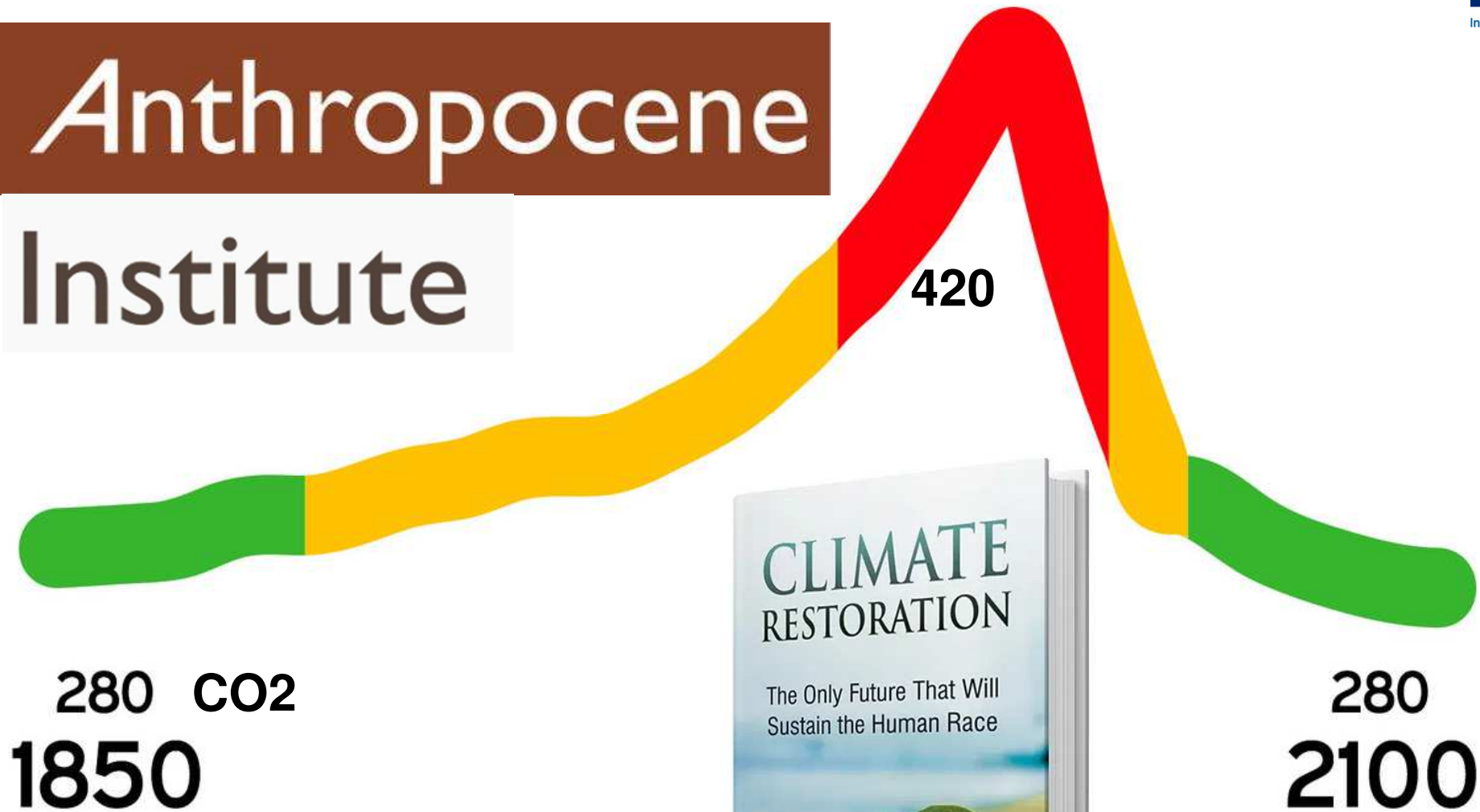


Carl Page, President
Anthropocene Institute
October 5th, 2023

Anthropocene Institute

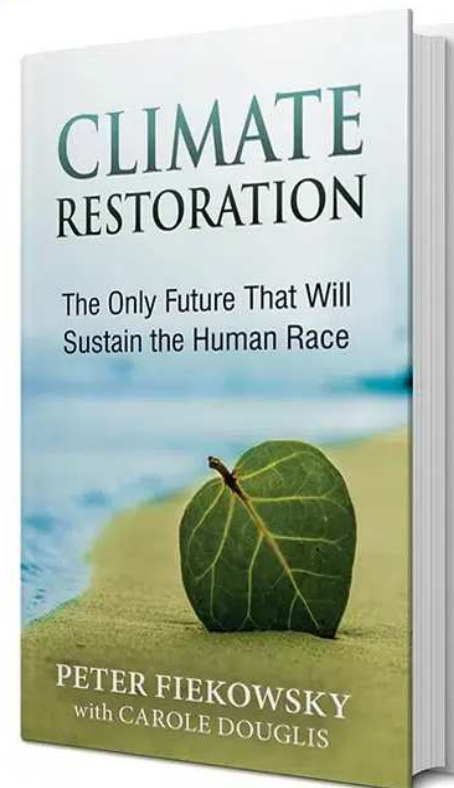
Anthropocene

Institute



280 CO2
1850

AirMiners.Org



Earn Volume Discount on Abundant Cheap Clean Energy

Energy Industry

Sell Cheaper

10x
Cheaper Energy
Supply

We Buy More

20x
More
Energy
Production

- Profits rise with Volume despite Price Decline
- Cultivate New Markets
- Streamline supply chain.
- Solving Security, Pollution



Humanity:

Security
Health
Productivity
Poverty Eliminated
Comfort
Freedom
Water
Food
Robots,
Transportation
Biosecurity



Biodiversity / Nature

Decoupling most human needs from biosphere. Wild lands increase as biofuels end. No more Impoverished people raiding wild lands for meager incomes, Sprawl reduced as cities get even more attractive. Agricultural chemicals drastically decrease in favor of automation, surveillance and robotics. Robotic Invasive species control
Tourism builds Empathy



Industry

Profits Increase
Wealthier Consumers
Opportunities Increase.
Supply Costs Decline
Much Better supply chain
Perfect recycling
Reliable Energy
Solve Pollution, Waste.



Losers: Expensive Cleantech
Energy Efficiency Plays
Preachers of Austerity and Guilt

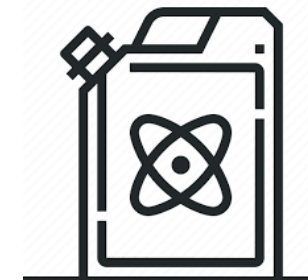
Nuclear is Dangerous Only to Fossil Fuel Businesses



Power Density (W/m ²)	2-3	10-20	1000-5000
Intermittency	High	High	Low
Capacity Factor	10%-25%	24%-56%	90%
Stability Cost. Frack Oil Gas Coal (\$\$) or Nuclear Baseload	Carbon:75%- 90% Or nuclear 0	Carbon:44%-76% Or Nuclear 0	0%
Mineral & Rad Waste	High	High	Low



**Nuclear Synthetic Hydrocarbon Liquid Fuels
Can Decarbonize Transportation with
Zero Emissions Fuels, We Already Can Use!**



Nuclear Saves Lives

GotNuclear.Net
990,134

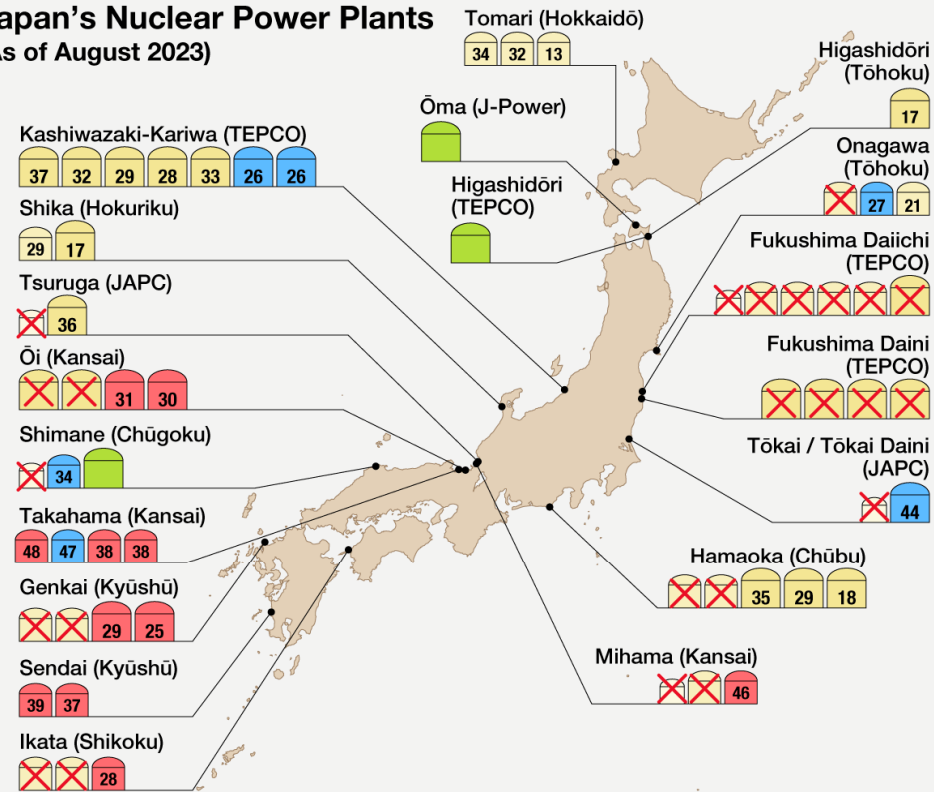
TOTAL LIVES SAVED IN THE US
BY NUCLEAR POWER.

How did we calculate this?



Nuclear energy already saved **300,000** lives in Japan

Japan's Nuclear Power Plants (As of August 2023)



Created by *Nippon.com* based on reference materials from the Agency for Natural Resources and Energy and power companies. Tōkai and reactors 1 and 2 of Hamaoka, which were all set to be decommissioned prior to the 2011 Great East Japan Earthquake, are included in the map.

Output

- Under 500,000 kW
- Under 1 million kW
- Over 1 million kW

Status

- Resumed operation (incl. reactors offline for routine inspections)
- Meets new standards
- Under construction
- To be decommissioned

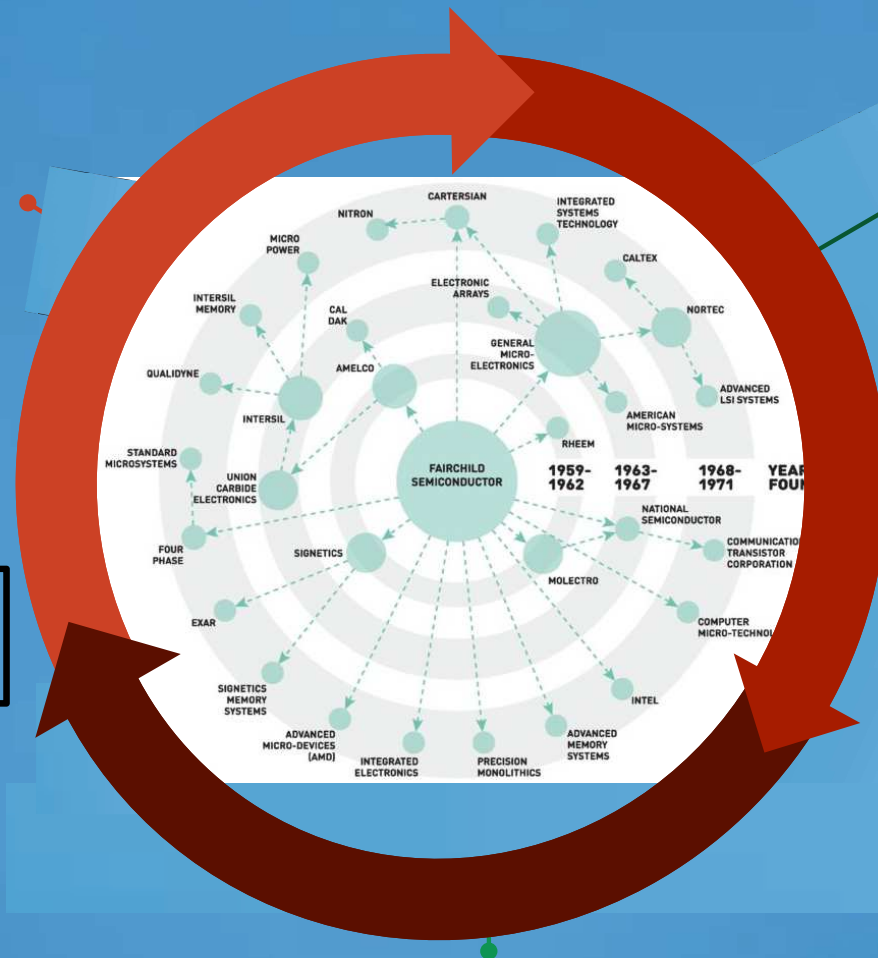
The numbers below the plant's name indicate the years since it started operations.

Silicon Valley: Nuclear Fission of Business

Company Exit (IPO)

An innovative company succeeds
Fully Realizes Potential
No Growth Left

VC



High Energy People

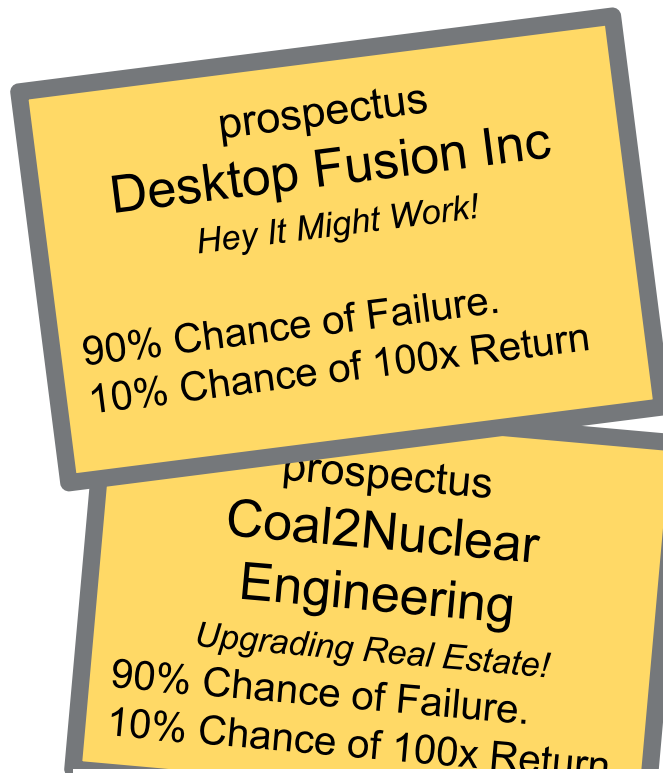
Founders and Early Employees.
Incentive Stock Option Cash
Domain Knowledge.
Track Record.
Reliable Partners
The Next Idea.



Start-Up Created

Experienced Entrepreneurs
have freedom to pursue
opportunity.

Necessary Support for the Growth of Start-ups



Invest in this and probably lose.

Invest in 20 companies like this? Will probably win big.

Such companies exist, but are hard to pick.
Less emphasis on current Financial metrics.
More attention to: Physical science. Supply chain. Market conditions.
They are incomplete. Need advice and partners.

The Angel Stage, before VC is poorly served.

An Optimal Portfolio requires a mix of low and high risk investments.

Our largest investors are prohibited from such investments.
Without such bets Tech evolution STOPS.
And Industrial Society Crumbles.

Beware the frenzy for Buzzword Compliant investments.
Overbought? Hysteria is not diligence.



Require Every Big Fund to make Some High Risk Investments.
Big funds could cultivate a narrow area of competence, and Improve Earnings.